

## ABSTRACT

A very simple four-cycle, multi-chamber rotary internal combustion engine that includes a hollow stator with inner surface formed by two concentric cylindrical surfaces which fluently transit one into the other via ramp surfaces, and a cylindrical rotor, having same radius as smaller concentric surface of the stator, with a vane-type pistons that can freely move in radial direction within radially made rectangular grooves in the rotor and having means permitting outer facets of the pistons to tightly contour the inner surface of the stator during rotation of the rotor is disclosed. The cavities within the stator made in the areas where the inner surface of the stator has the same radius as that of the rotor form combustion chambers, which connect to the working chamber formed between outer surface of the rotor and inner surface of the stator with bigger radius via the orifices ending within the portions of the ramp surfaces of the stator. Timely connections among combustion and working chambers during compression and power cycles are regulated by conventional valve system.